Abstract

An object of the present invention is to provide a novel controller and a control method which, in a nonlinear system in which a controller 1 and a controlled object 2 cannot be clearly separated, can converge the relationship between the controller 1 and controlled object 2 to a target relationship.

The controller 1 of the present invention comprises a first module 3 having dynamic behavior as a nonlinear system and a second module 4 as a feedback system. The first module 3 creates a synchronous state with the controlled object 2 through an entrainment effect in an interaction therewith. When a synchronous state is created between the first module 3 and the controlled object 2, the second module 4 provides feedback to adjust a parameter of the first module 3 based on the difference between a relation value 5 relating to the synchronization and a target relation value. The controlled object 2 is controlled by the convergence of the relation value 5 relating to the synchronization to the target value.